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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/815,942 | 03/23/2001 | Stephen Blott | Blott 9-7-10 | 8249 |

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| EXAMINER | |
|---|---|
| SIDDIQI, MOHAMMAD A | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2126 | 8 |

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application N . | Applicant(s) | |
|---|---|---|---|
| | 09/815,942 | BLOTT ET AL. | |
| | Examiner | Art Unit | |
| | Mohammad A Siddiqi | 2126 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03/23/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

**DETAILED ACTION**

**DETAILED ACTION**

1. Claims 1- 20 are presented for examination.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was pate ed or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, 9-12, 15,17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldsmith et al. (5491800) (hereinafter Goldsmith).

4. As per claims 1,17, and 19, Goldsmith discloses an application programming interface (API) (figure 3, element 302,352) for network applications (figure 1) capable of processing packets (col 1, lines 43-45) having source and destination nodes different from the node (figure 3, element 305,355) where the application runs, said API comprising (see abstract):

first and second data structures associated with a network interface in communication with a network (col 23, lines 56-67 and col 24, lines 1-22),

said first and second data structures being mapped to an operating system and a network application (figure 2, element 200,250, col 23, lines 56-67 and col 24, lines 1-22), wherein:

packets to be passed from the operating system to the network application (col 1, lines 42-45) are stored in a buffer (col 13, lines 23-28) and referenced via respective pointers (col 13, lines 37-40) within said first data structure, said first data structure pointers (col 13, lines 37-40) being inserted into said first data structure by said operating system prior to network layer processing (figure 8, col 13, lines 45-50), said first data structure pointers being removed by said network application(col 17 , lines 24-27), insertion and removal of said first data structure pointers(col 17, lines 12-27) being asynchronous (col 15, lines 19-21) with respect to each other; and

packets to be processed as received packets by said network layer (figure 8) of said operating system are stored in a buffer and referenced via respective pointers within said second data structure (col 12, lines 45-62), said second data structure pointers being inserted into said second data structure by said network application (figure 13 element 1306), said second data structure pointers being removed by said operating system (figure 15B element 1516), insertion and removal of said second data structure pointers being asynchronous (col 15, lines 19-21) with respect to each other.

5. As per claim 5, Goldsmith discloses the operating system's network layer implements the Internet Protocol (IP) (figure 2,col 2, lines 24-67, IP is implemented in the third layer of the OSI reference model).

6. As per claim 9, Goldsmith discloses other network applications do not access a buffer from the time said network application removes a pointer to said buffer from said first data structure and inserts a pointer to said buffer into said second data structure (col 15, lines 4-12).

7. As per claim 10, Goldsmith discloses each buffer contains an identifier of a network application having exclusive use of the buffer (col 1, lines 40-43).

8. As per claim 11, Goldsmith discloses upon termination of a network application, the operating system automatically reclaims buffers that are in the application's exclusive use (col 23, lines 14-43).

9. As per claim 12, Goldsmith discloses first or second data structure is a circular queue (col 13, lines 31-33).

10. As per claim 15, Goldsmith discloses wherein the node where the network application runs is configured as one of a host, a bridge, a switch and a router (figure2, col 2 lines 8-32, data link layer in OSI model).

## *Claim Rejections - 35 USC § 103*

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 2-4,6-8,13,14,16, 18, and 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldsmith et al. (5491800) (hereinafter Goldsmith) in view of Northrup et al. (6546413) (hereinafter Northrup).

13. As per claim 2, Goldsmith discloses creating said first and a second data structures if said first and a second data structures are not available (figure 7, element 726,766,col 7, lines 63-67 and col 8 lines 17,). Goldsmith fails to disclose a primitive for creating said first and a second data structures.

However, Northrup discloses a primitive for creating said first and a second data structures if said first and a second data structures are not available (Figure 23.A, 23.B, Col 47, lines 25-32, col 31, lines 39-51).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in the template classes to have a robust communication framework that provides standards for the evolving protocols.

14. As per claims 3,18, and 20 Goldsmith fails to disclose a primitive for unmapping said first and a second data structures from the network application, said unmapping primitive operating to destroy said first and a second data structures if said data structures are mapped to no other network application.

However, Northrup discloses a primitive for unmapping said first and a second data structures from the network application (col 28,lines 25-36) said unmapping primitive operating to destroy (col 28,lines 25-36) said first and a second data structures if said data structures are mapped to no other network application (col 28,lines 25-64).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in

the template classes to have a robust communication framework that provides standards for the evolving protocols.

15. As per claim 4, Goldsmith discloses first and a second data structures (col 19, lines 15-45) not being associated with the network interface, the operating system automatically passes the packets received from the network by the network interface to the operating system's network layer (col 3, lines 41-55), for processing (col 3, lines 41-55), and automatically passes the packets output by the operating system's network layer to the network interface, for sending to the network (col 3, lines 41-62).

16. AS per claim 6, Goldsmith discloses allocated buffers to be passed from the operating system to the network application are referenced via respective pointers within said first data structure (figure 3, element 302, 310,311), said first data structure pointers being inserted into said first data structure by said operating system (figure 13, element 1306), said first data structure pointers being removed by said network application (figure 15B, element 1516); and

deallocated buffers to be passed from said network application to said operating system are stored in a buffer and referenced via respective pointers within said second data structure (figure 13, col 17, lines 1-3), said

second data structure pointers being inserted into said second data structure by said network application (figure 15B, element 1522), said second data structure pointers being removed by said operating system (figure 15, element 1516, col 19, lines 50-61).

Goldsmith fails to disclose a primitive for creating said first and a second data structures mapped both to said operating system and said network application.

However, Northrup discloses a primitive for creating said first and a second data structures mapped both to said operating system and said network application (col 28,lines 25-64).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in the template classes to have a robust communication framework that provides standards for the evolving protocols.

17. As per claim 7, Goldsmith discloses the operating system maintains in said first data structure (figure 2, col 2, lines 45-64) at least a predefined number of pointers (col 1, lines 43-51, pointer is an address).

18. As per claim 8, Goldsmith fails to disclose a primitive to destroy said first and second data structures.

However, Northrup discloses a primitive to destroy said first and second data structures (col 28,lines 25-64).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in the template classes to have a robust communication framework that provides standards for the evolving protocols.

19. As per claim 13, Goldsmith fails to disclose a primitive for placing the network application in a quiescent state until the operating system inserts a pointer into said first data structure.

However, Northrup discloses a primitive for placing the network application in a quiescent state until the operating system inserts (col 49, lines 43-54) a pointer into said first data structure (col 32, lines 50-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in the template classes to have a robust communication framework that provides standards for the evolving protocols.

20. As per claim 14, Goldsmith fails to disclose a primitive for placing the network application in a quiescent state until the operating system removes a pointer from said second data structure.

However, Northrup discloses a primitive for placing the network application in a quiescent state until the operating system removes a pointer from said second data structure (col 32, lines 55-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in the template classes to have a robust communication framework that provides standards for the evolving protocols.

21. As per claim 16, Goldsmith fails to disclose other network applications do not access a buffer from the time said network application removes a pointer to said buffer from said first data structure and inserts a pointer to said buffer into said second data structure.

However, Northrup discloses other network applications do not access a buffer from the time said network application removes a pointer to said buffer from said first data structure and inserts a pointer to said buffer into said second data structure (col 28, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to include primitive functions and primitive data types in the

template classes to have a robust communication framework that provides standards for the evolving protocols.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 6064805 to McCory et al.

U.S. Patent 6282581 to Moore at al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A Siddiqi whose telephone number is (703) 305-0353. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MAS

JOHN FOLLANSBEE
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